

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1 (currently amended): A high strength electrical steel sheet and a processed part of the same characterized by containing, by mass %, C: 0.06% or less, Si: 0.2 to 6.5%, Mn: 0.05 to 3.0%, P: 0.30% or less, S or Se: 0.040% or less, Al: 2.50% or less, Cu: 0.6 to 8.0%, Cr: 4.5% or less, N: 0.0400% or less, and a balance of Fe and unavoidable impurities and containing ~~in the steel~~ a metal phase comprised of Cu ~~of~~ having a diameter of 0.1 μm or less in the steel sheet by means of holding the steel sheet in a heat treatment at a temperature range of 300°C to 650°C for 5 seconds or more during production of the processed part.

2 (currently amended): A high strength electrical steel sheet and a processed part of the same as set forth in claim 1, characterized by further containing, by mass%, one or more of Nb: 8% or less, Ti: 1.0% or less, B: 0.010% or less, and Ni: 5% or less ~~and Cr: 15.0% or less~~.

3 (previously presented): A high strength electrical steel sheet and a processed part of the same as set forth in claim 1, characterized by further containing, by mass%, one or more of Bi, Mo, W, Sn, Sb, Mg, Ca, Ce, La, and Co in a total of 0.5% or less.

4 (previously presented): A high strength electrical steel sheet and a processed part of the same as set forth in claim 1, wherein the number density of the metal phase comprised of Cu present in said steel is $20/\mu\text{m}^3$ or more.

5 (previously presented): A high strength electrical steel sheet and a processed part of the same as set forth in claim 1, wherein said steel sheet has an average crystal grain size of 30 to 300 μm .

6 (previously presented): A high strength electrical steel sheet and a processed part of the same as set forth in claim 1, wherein the steel sheet has a processed structure remaining in it.

7 (previously presented): A high strength electrical steel sheet and a processed part of the same as set forth in claim 1, characterized in that the steel sheet or the part contains a Nb carbide or nitride.

Claims 8 to 10: (canceled).

11 (previously presented): A processed part of a high strength electrical steel sheet as set forth in claim 1, characterized wherein the part is heat treated after processing for shaping so that the metal phase comprised mainly of Cu present in the processed part has a number density of $20/\mu\text{m}^3$ or more.

12 (previously presented): A processed part of a high strength electrical steel sheet as set forth in claim 1, characterized wherein the part is heat treated after processing for shaping so that the metal phase comprised mainly of Cu present in the part has an average size of $0.1\ \mu\text{m}$ or less.

13 (previously presented): A processed part of a high strength electrical steel sheet as set forth in claim 1, characterized wherein the part is heat treated after processing for shaping so that the part has an average crystal grains size of 3 to $300\ \mu\text{m}$.

14 (previously presented): A processed part of a high strength electrical steel sheet as set forth in claim 1, characterized wherein the part is heat treated after processing for shaping so that the number density of the metal phase comprised mainly of Cu with a size of $0.1\ \mu\text{m}$ or less in the processed part is increased by 10-fold or more.

15 (previously presented): A processed part of a high strength electrical steel sheet as set forth in claim 1, wherein the part is heat treated after processing for shaping so that the tensile strength is increased by 30 MPa or more.

16 (previously presented): A processed part of a high strength electrical steel sheet as set forth in claim 1, wherein the part is heat treated after processing for shaping so that the hardness is increased by 1.1-fold or more.

Claims 17 to 20: (canceled).